

Before the
FEDERAL COMMUNICATIONS COMMISSION
 Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the matter of:

Guidelines for Evaluating the
 Environmental Effects of
 Radiofrequency Radiation

ET Docket No. 93-62

**REPLY COMMENTS OF PERSONAL COMMUNICATIONS
 INDUSTRIES ASSOCIATION**

The Personal Communications Industries Association ("PCIA") hereby submits these reply comments in the FCC's proceeding to refine its guidelines for evaluating the environmental effects of radiofrequency ("RF") radiation. As discussed in its opening comments,¹ PCIA supports the Commission's goals in this proceeding and urges that the Commission continue with its current thoughtful and scientific approach to resolving the complex issues.

I. BACKGROUND AND INTRODUCTION

This proceeding was initiated in March of 1993 so that the FCC could update its rules necessary to discharge its responsibilities under the National Environmental Policy of Act of 1969 ("NEPA").² One of the environmental factors considered by the FCC under its NEPA requirements is human exposure to RF radiation from FCC-regulated transmitters and

¹ PCIA filed opening round comments in this proceeding under its former name Telocator.

² *Notice of Proposed Rule Making*, ET Docket No. 93-62, 8 F.C.C. Rcd 2849 (1993) (hereinafter *Notice*).

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facilities. Since the mid-1980s, the Commission has relied upon RF exposure standards developed by the Institute of Electrical and Electronic Engineers ("IEEE") and adopted in 1982 by the American National Standards Institute ("ANSI").³ In the instant *Notice*, the Commission has proposed to substitute its reliance on the 1982 standard with a revised standard adopted by ANSI and IEEE in 1992.⁴

As representatives for existing and emerging personal communications service providers and equipment manufacturers, PCIA takes great interest in the successful completion of this proceeding. Our goal is the same as the Commission's -- to promote the proliferation of safe communications devices posing no risks to human health and the environment. By proceeding in a manner outlined in the *Notice* and in these comments, the Commission can be assured of reaching that goal.

To this end, PCIA reiterates its earlier recommendations to: 1) adopt the 1992 ANSI/IEEE exposure standard, 2) maintain the categorical exclusions for land mobile base stations and low power devices, and 3) utilize the equipment authorization process to ensure compliance with the new standards for those devices falling outside the scope of the categorical exclusions. Furthermore, upon review of the record, PCIA joins the many commenters that urge the FCC to preempt state and local jurisdictions from regulating environmental RF exposure. The record contains far too many examples of excessively burdensome local regulations that have no basis in scientific or medical fact. The regulations

³ ANSI C95.1-1982, *American National Standard Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz*.

⁴ ANSI/IEEE C95.1-1992, *Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz*.

are frustrating the deployment of existing wireless services and, unless action is taken, threatens the rapid roll-out of new 2 GHz personal communications services.

II. THE RECORDS SHOWS STRONG SUPPORT FOR REVISING THE FCC'S RULES TO BASE ENVIRONMENTAL ASSESSMENTS ON THE 1992 ANSI/IEEE SAFETY STANDARD

The record developed in this proceeding demonstrates strong support across a broad range of radio industries that the Commission should proceed expeditiously with its proposal to base its regulations on the new ANSI/IEEE safety standard.⁵ PCIA concurs with the National Association of Broadcasters that "the revised ANSI standard reflects much more current thinking, theory and scientific findings than the body of knowledge upon which the 1982 ANSI standard was based" and that, while other standards options exist, "[t]he other

⁵ Comments of Alcatel SEL ("Alcatel") at 1; Comments of American Personal Communications ("APC") at 2-3; Comments of American Telephone & Telegraph Co. ("AT&T") at 1-7; Comments of Apple Computer, Inc. ("Apple") at 2; Comments of the Arizona Department of Public Safety ("Arizona") at 7; Comments of the Association of Maximum Service Television, Inc. and National Broadcasting Company, Inc. ("AMSTV/NBC") at 1-2; Comments of the Association of Federal Communications Consulting Engineers ("AFCCE") at 2; Comments of BellSouth Corporation, BellSouth Telecommunications, Inc., BellSouth Enterprises, Inc., and BellSouth Cellular Corp. ("BellSouth") at 1; Comments of Broadcast Signal Lab at 1-2; Comments of CBS, Inc., Capital Cities/ABC Inc., Greater Media, Inc., and Westinghouse Broadcasting Company, Inc. ("CBS") at 4; Comments of the Cellular Telecommunications Industry Association ("CTIA") at 2-3; Comments of Cohen, Dippell & Everist, P.C. at 1; Comments of Jules Cohen & Associates, P.C. ("JC&A") at 1; Comments of the Department of Defense at 2; Comments of E.F. Johnson Company ("E.F. Johnson") at 2-3, 8-9; Comments of the Electromagnetic Energy Policy Alliance ("EEPA") at 1-2; Comments of Sheldon L. Epstein, Esq. ("Epstein") at 5; Comments of Ericsson Corporation ("Ericsson") at 2, 4; Comments of the Food and Drug Administration at 1; Comments of Ford Motor Company at 2-3; Comments of GTE Service Company ("GTE") at 2-3; Comments of Hatfield & Dawson Consulting Engineers, Inc. at 6; Comments of IEEE - United States Activities Committee on Man and Radiation ("IEEE/COMAR") at 1; Comments of the Land Mobile Communications Council ("LMCC") at 3; Comments of McCaw Cellular Communications, Inc. ("McCaw") at 2-6; Comments of Motorola, Inc. at 1-2; Comments of the National Association of Broadcasters ("NAB") at 9-10; Comments of the National Association of Business and Educational Radio, Inc. ("NABER") at 2-3; Comments of Northern Telecom, Inc. ("Northern Telecom") at 1, 7; Comments of Pacific Bell & Nevada Bell at 1; Comments of PacTel Corporation ("PacTel") at 2; Comments of Paging Network, Inc. ("PageNet") at 3-4; Comments of Raytheon Company at 1; Comments of Southwestern Bell Mobile Systems, Inc. ("SWB") at 2; Comments of Sprint Cellular Company ("Sprint") at 1; Comments of the Telecommunications Industry Association ("TIA") at 1; Comments of TRW, Inc. at 12-13; Comments of the United States Telephone Association ("USTA") at 1-2; Comments of the Utilities Telecommunications Council ("UTC") at 1.

standards predate C95.1-1992 by at least four years . . . [and] the data base of scientific literature used in the development of the ANSI/IEEE standard was far more comprehensive and contained more recent publications than was used in the development of other standards."⁶

Furthermore, commenters have noted that the ANSI/IEEE standard "reflects a broad consensus of the scientific and engineering communities regarding maximum permissible exposures (MPEs) that will help to assure safe work places and living environments,"⁷ and, in any event, "[is] based on extremely conservative margins of error with significant safety factors."⁸ Based on this record, the 1992 ANSI/IEEE standard appears to reflect the most scientific, up-to-date consensus regarding the potential health effects of RF exposure. Accordingly, the 1992 ANSI/IEEE standard provides the most appropriate basis for revised FCC regulations governing assessments under NEPA.⁹

⁶ NAB at 3, 32-35.

⁷ IEEE/COMAR at 1.

⁸ GTE at 4-6.

⁹ While PCIA notes that, of the two federal agencies with specific human health mandates filing in this proceeding, the FDA prefers the ANSI/IEEE standard and the EPA prefers the NCRP standard, as a practical matter, the ultimate recommendations of the EPA are relatively consistent with the ANSI/IEEE standard and the ANSI/IEEE standard is the more recent of the two. Specifically, both standards relate the maximum field strength to frequency using the same formula over most of the spectrum and the EPA agrees that the FCC's proposed implementation of the controlled/uncontrolled limits is similar to the two-tier occupational/general population standard used in the NCRP standard. Comments of the Environmental Protection Agency, *passim*.

III. THE EXISTING CATEGORICAL EXCLUSIONS SHOULD BE MAINTAINED TO MINIMIZE UNNECESSARY BURDENS ON COMMISSION LICENSEES

In its original comments, PCIA noted that, because of the minimal possibility of land mobile facilities exceeding Maximum Permissible Exposure ("MPEs") levels set by the 1992 ANSI/IEEE safety standard, the existing categorical exclusion for land mobile transmitters should be maintained.¹⁰ In fact, Glenayre demonstrated that, in the worst case example of a high power paging transmitter, "the distance required in order to meet the ANSI/IEEE guidelines of 3 mW/cm² (900 MHz), is conservatively 3 to 4 meters in the main beam of the antenna."¹¹ Similarly, EEPA observed that "[t]he results of field-strength measurements made in the vicinity of typical tower-mounted antennas used for cellular radio, extrapolated to represent worst-case conditions, have shown that exposure of the public is at levels below 1 μ W/cm²,"¹² Consequently, "continuation of the FCC's existing categorical exclusion for land mobile facilities is appropriate given the minimal opportunity for overexposure and land mobile's minute contribution to the ambient EMF emissions in the environment."¹³

The categorical exclusion for land mobile facilities is a highly effective means of limiting unnecessary administrative burdens on FCC licensees. As discussed above,

¹⁰ Comments of Telocator at 9-10; AT&T at 7-11; Comments of AMSC Subsidiary Corporation ("AMSC") at 10; Arizona at 6; AMSTV/NBC at 5-7; AFCCE at 4-5; BellSouth at 7-8; JC&A at 5-7; E.F. Johnson at 7; EEPA at 5-8; Ericsson at 16-17; Glenayre at 2; GTE at 7-17; LMCC at 7-9; McCaw at 7-13; Motorola at 14-20; NAB at 20-26; NABER at 4-6; PacTel at 7-11, Exhibit 3; PageNet at 5-6, Attachment; Sprint at 3-6; TIA at 18-24; USTA at 3; UTC at 6-7; Comments of Wizard Broadcasting Company at 3.

¹¹ Comments of Glenayre Electronics, Inc. at 2.

¹² EEPA at 6-7.

¹³ PacTel at 7-11, Exhibit 3.

compliance of land mobile facilities, even under the new 1992 ANSI/IEEE standard, can be assured in the ordinary course of operation. Under these circumstances, there is no public interest benefit in requiring carriers to develop expensive, time-consuming engineering and paperwork to demonstrate compliance of facilities.

IV. THE EQUIPMENT AUTHORIZATION PROCESS IS THE APPROPRIATE ADMINISTRATIVE PROCEDURE FOR ENSURING THE COMPLIANCE OF END-USER RADIO EQUIPMENT

The comments have also demonstrated uniformity among carriers, users, and manufacturers that the equipment authorization process is the appropriate method of ensuring the compliance of end-user mobile radio devices.¹⁴ As discussed in the comments of BellSouth, in many instances carriers have very little control over the classes of devices used on public radio systems.¹⁵ Equipment manufacturers, in contrast, must already seek type acceptance of classes of mobile equipment, a process that can be relatively easily adapted to include requirements regarding the RF exposure potential of mobile units.

In this regard, PCIA also urged the Commission to extend the low power exclusion in the ANSI/IEEE standard from the current limit at 1.5 GHz to include PCS devices that will operate up to 2.2 GHz. PCIA specifically noted in these comments that the proposed change had, in fact, been submitted by the Commission to Subcommittee IV of IEEE Standards Coordinating Committee 28, which had indicated that the proposal would be conservative in

¹⁴ Telocator at 4-5; AFCCE at 4; BellSouth at 8; CTIA at 6; JC&A at 4; EEPA at 5; Ericsson at 15; Comments of Matsushita at 10-11; McCaw at __; NABER at 4-5; SWB at 5; TIA at 12, 29; UTC at 8.

¹⁵ BellSouth at 8 (Because "[end-user cellular] equipment may be used both on the customer's home system and on other systems as a roamer," "[t]he carrier providing service has no way to ensure that such equipment is installed so as to meet the standards").

nature. Based on this opinion and the strong support of a number of commenters indicating that the change would be appropriate and reduce substantial, and unnecessary compliance burdens on manufacturers,¹⁶ PCIA urges the Commission to extrapolate the existing formula in Section 4.2.2.1 of ANSI/IEEE C95.1-1992 through the 2 GHz frequencies.

V. THE FCC SHOULD INITIATE A FURTHER PROCEEDING TO CONSIDER PREEMPTION OF STATE RF REGULATION

Based on strong record evidence that state and local regulation of RF exposure is, in cases, impeding land mobile licensees' ability to provide wireless services to the public, a further notice of proposed rule making considering state preemption is appropriate.¹⁷ As discussed below, commenters have detailed numerous instances where state and local authorities' jurisdiction over RF exposure has been exercised to limit licensees' access to new transmitter sites and even to condition modifications proposed for existing sites. Because these actions threaten the continued expansion and maintenance of the nation's existing and wireless communications networks, as well as the deployment of PCS systems, and because the actions of these state and local regulators often appear to bear little relationship to verifiable health concerns, preemption must be considered.

¹⁶ Telocator at 5-8; Alcatel at 2; Apple at 3; BellSouth at 3-4; E.F. Johnson at 6-7; Northern Telecom at 3-4; Sprint at 8-9; TIA at 10-11.

¹⁷ Comments of the American Radio Relay League, Inc. at 15; AMSC at 14; AMSTV at 8-9; CBS at 42-46; Comments of Celpage, Inc. at 4-8; CD&E at 3; Epstein at 1-4; Ericsson at 17-18; Comments of Hammett & Edison ("H&E") at 3-7; Comments of Alan S. Kaul at 1; McCaw at 17-30; NAB at 40-45; Comments of National Public Radio at 9-10; Comments of New Jersey Broadcasters Association at 1-5; PacTel at 3-6, Attachments 1 & 2; TIA at 34-35; Comments of Louis A. Williams, Jr. & Associates at 2.

Commenters representing a broad range of the wireless industry have described circumstances where state and local RF exposure regulation is impeding FCC licensees' delivery of service to the public. These situations include:

- ▶ "The Commonwealth of Puerto Rico adopted its own RF radiation rules . . . accompanied by a new bureaucracy, as well as substantial and burdensome regulatory requirements that could slow the growth of radio services in Puerto Rico."¹⁸ These rules "require FCC licensees to perform extremely complicated, and unnecessary, engineering studies prior to using any new transmitter site, and whenever an additional transmitter is installed at an existing site."¹⁹
- ▶ The Village of Wilmette, Illinois, "adopted a requirement that power densities from cellular base stations be below $0.25 \mu\text{W}/\text{cm}^2$ at ground levels 1,000 feet from the proposed site."²⁰
- ▶ Multnomah County, Oregon, "requires [field] measurements in all cases, stipulates that these measurements must be done only by a registered professional engineer, and requires continuous measurements for a 168-hour (7-day) period if the measurements show a level greater than one-fifth of the $200 \mu\text{W}/\text{cm}^2$ level (*i.e.*, $40 \mu\text{W}/\text{cm}^2$) allowed at VHF frequencies allowed by the ordinance."²¹
- ▶ The Port Authority of New York and New Jersey, "adopted a frequency-independent (*i.e.*, 'flat') $100 \mu\text{W}/\text{cm}^2$ exposure standard [for the World Trade Center], 16 to 27 (12 to 14 dB) more restrictive than ANSI 1992."²²

¹⁸ CBS at 43 (citing Celpage at 5).

¹⁹ Celpage at 5.

²⁰ CBS at 44 (citing The Village of Wilmette Reply Memorandum ("Wilmette")).

²¹ H&E at 4 (citing Multnomah County, Oregon, Ordinance MCC.7035(F)(4)(b)(v), MCC.7035(F)(4)(b)(iii)).

²² H&E at 4.

- ▶ **Berkeley, California, only approved a new site because of a modification to "reduce[] the predicted power densities at all publicly accessible areas to less than the then-existing Soviet RFR standard of 2.4 *microW/cm²*"²³**
- ▶ **The City Council of West Hollywood, California, overturned two conditional use permits approved by the planning commission "conclud[ing] that absent proof that cellular emissions were safe, it had a duty to protect the public from the risk of harm from new or modified cellular and microwave facilities."²⁴**

Situations like these should be of great concern because the actions of these local authorities do not appear to be premised on any rational evaluation of verifiable health effects related to RF exposure. Many state and local decision makers, quite simply, do not possess the resources or knowledge to evaluate RF exposure issues free of the "press scares and media hype"²⁵ that have, to date, characterized public debate on radio usage. Like the commenters urging preemption, PCIA believes that the exercise of state and local authority over RF exposure under these circumstances can impinge upon important FCC policies, most notably the Commission's mandate to "make available . . . to all people of the United States a rapid, efficient, Nation-wide, and world wide wire and radio communications service with adequate facilities at reasonable charges."²⁶

Consequently, PCIA believes an inquiry into preempting state and local exercise of jurisdiction over RF exposure issues is both necessary and appropriate. As commenters have noted, the FCC is in the process of developing a federal standard for evaluating RF

²³ H&E at 5.

²⁴ PacTel at 5, Attachment 2.

²⁵ See Notice, 8 FCC Rcd at 2862 (Separate Statement of Commissioner Ervin S. Duggan).

²⁶ 47 U.S.C. § 151.

exposure. Once this standard is in place, the FCC will have a basis for evaluating whether the exercise of state and local authority over RF exposure is excessive to the degree that it interferes with licensees' ability to utilize properly authorized radio facilities. In these circumstances at least, preemption must be considered.

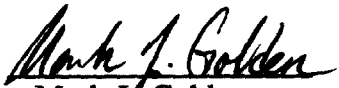
VI. CONCLUSION

PCIA, and a broad range of other commenters, have strongly supported the tentative conclusions in the Commission's *Notice* in this proceeding. Specifically, as PCIA has demonstrated, the record in this proceeding supports: (1) adopting the 1992 ANSI/IEEE exposure standard; (2) maintaining the existing categorical exclusions for land mobile base stations and low power devices; (3) utilizing the equipment authorization process to ensure compliance with the new standards for those devices falling outside the scope of the categorical exclusions; and, (4) issuing a further notice in this proceeding considering preemption of state and local jurisdiction over environmental RF exposure. PCIA believes

that the record in this proceeding demonstrates that action consistent with these suggestions would be in the public interest and consistent with the Commission's obligations under the National Environmental Policy Act of 1969.

Respectfully submitted,

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